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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,182	09/30/2003	Seuk-Jin Yun	1349.1291	1252

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STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

NGUYEN, LAM S

ART UNIT	PAPER NUMBER
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2853

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/673,182

Applicant(s)

YUN, SEUK-JIN

Examiner

LAM S. NGUYEN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5,6 and 9-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,6 and 9-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 03/12/07.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

The indicated allowability of claims 1-2, 5-6, 9-21 is withdrawn in view of the newly discovered reference(s) to Yanagi et al. (US 6655865). Rejections based on the newly cited reference(s) as follows:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 5-6 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogasahara et al. (US 2002/0054305 A1) in view of Yanagi et al. (US 6655865).

Referring to claim 5:

Ogasahara et al. discloses an apparatus that corrects a white line of an inkjet printer, comprising:

a driving section which positions a paper (*FIG. 37A-C: SHEET*) at printing positions including a normal position and an overfeeding position corresponding to an over feed amount of the paper (*Fig. 19A-B: A normal position is the area of the sheet which is ensured that sheet is fed accurately. An overfeeding position is the area (white stripe area) of the sheet that is not ensured that sheet is fed accurately*), and drives an ink cartridge in response to control signals to print a line;

a memory and control section which stores the overfeeding position and outputs the control signals (*paragraphs [0235], [0236]; page 15, table 1: A corresponding memory stores the feeding error during each feeding operation. Paragraph [0298-0300]: A*

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corresponding controller shifts the range of ejection ports (nozzles) in accordance to a known error in each pass that is stored in table 1);

a plurality of nozzles, in the ink cartridge, printing a normal printing area in a preset printing width (*FIG. 40: Normal ejection ports 256*), and

a plurality of dummy nozzles, in the ink cartridge, printing in the overfeeding position (*paragraph [0298]: Correcting sheet feeding error by using back up ejection ports (nozzles). FIG. 40: BACKUP EJECTION PORTS*).

Ogasahara et al., however, does not teach wherein if the printing position is just before the overfeeding position, the dummy nozzles print a width corresponding to the overfeeding amount together with all of the nozzles printing the normal printing area corresponding to the entire preset printing width, thereby forming an overfeeding printing area that is greater than the normal printing area.

Yanagi et al. discloses an printing apparatus including an ink jet printhead for forming images on a printing medium, wherein the printhead includes dummy nozzles (*FIG. 10A, element INOPERATIVE NOZZLE (FOR CORRECTION)*) printing a width corresponding to an error feeding amount together with all of nozzles (*FIG. 10A, element OPERATIVE NOZZLE*) printing a normal printing area thereby forming a printing area that is greater than the normal printing area (*column 11, line 65 to column 12, line 8*).

Therefore, it would have been obvious for one having ordinary skill in the art at the time invention was made to modify Ogasahara et al.'s printing apparatus to print the overfeeding area using the dummy nozzles (inoperative nozzles) and the normal nozzles (operative nozzles) as disclosed by Yanagi et al. The motivation for doing so would have been to compensate for longer or shorter feeding amount due to any trouble as taught by Yanagi et al. (*column 11, line 65 to column 12, line 8*).

- **Ogasahara et al. also discloses the following claimed invention:**

Referring to claim 6: wherein the ink cartridge repeatedly performs reciprocal left and right movements in response to the control signals (*FIG. 2*).

Referring to claim 9: wherein the nozzles and the dummy nozzles are formed in the underside of the ink cartridge (*FIG. 40, element HEAD*).

Referring to claim 10: wherein the printing is implemented by the nozzles located in a printing area retreated from the normal printing area by the width of the dummy nozzles until the printing is terminated starting from the line positioned just after the overfeeding position (*FIG. 37B-C, and 40*).

2. Claims 1-2, 11-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogasahara et al. (US 2002/0054305 A1) in view of Yanagi et al. (US 2002/0113363 A2), and in view of Yamasaki et al. (US 2003/0048326 A1). (*For rejection regarding to claims 14, 17, and 20, please refer to rejection regarding to claim 10*).

Ogasahara et al., as modified, discloses the claimed invention as discussed above and also teaches a pickup roller to pick up a paper when a printing command is inputted (*FIG. 43A-B, elements 3A-B*), judging whether a leading edge of the paper enters using a paper-detection sensor and transferring the paper to the printing position (*paragraph [0332]*), implementing the printing using dummy nozzles which are not used in the printing of the sequential implementing operation (*Fig. 40: Backup ejection ports are not used when the sheet feeding error not occurring*).

Ogasahara et al., as modified, however does not disclose judging a stored characteristic overfeeding amount and characteristic overfeeding position corresponding to the paper by determining a type/material of the paper being used.

Yamasaki et al. teaches that the precision of the sub-scan feed of a printing medium depends on the type of the printing medium. For example, the actual feed amount (overfeeding or underfeeding amount) may vary considerably between printing media with easy-slip surfaces and

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printing media with surfaces that do not slip easily (*paragraph [0005]*) or between printing medium having different materials such as ordinary paper, glossy film, photographic paper (*FIG. 14*), wherein the error amount reflected by correction values are stored in a look up table (*FIG. 14*).

Therefore, it would have been obvious for one having ordinary skill in the art at the time the invention was made to modify the controller disclosed by Ogasahara et al., as modified, to also consider the type of the printing medium in determining the error feeding as disclosed by Yamasaki et al. The motivation for doing so would have been to ensure the degree of precision of the paper feed in order to obtain great effect on the image quality as taught by Yamasaka et al. (*paragraph [0006]*).

Response to Arguments

The indicated allowability of claims 1-2, 5-6, 9-21 is withdrawn in view of the newly discovered reference(s) to Yanagi et al. (US 6655865). Rejections based on the newly cited reference(s) are as above.

Conclusion

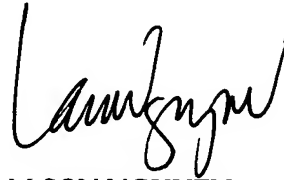
Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAM S. NGUYEN whose telephone number is (571)272-2151. The examiner can normally be reached on 7:00AM - 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, STEPHEN D. MEIER can be reached on (571)272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Lam Son Nguyen', written in a cursive style.

LAM SON NGUYEN